

TITLE 327 WATER POLLUTION CONTROL BOARD

PROPOSED RULE AS PRELIMINARILY ADOPTED WITH IDEM'S SUGGESTED CHANGES INCORPORATED LSA Document #99-263

DIGEST

Adds 327 IAC 2-11 to establish ground water quality standards in response to the requirements of the Ground Water Protection Act of 1989 (IC 13-18-17-5) that requires the water pollution control board to adopt rules under IC 4-22-2 concerning ground water quality standards. Repeals 327 IAC 2-1-7 and 327 IAC 2-1.5-9. Effective 30 days after filing with the secretary of state.

HISTORY

First Notice of Comment Period: July 1, 1994, Indiana Register (17 IR 2467) and October 1, 1997, Indiana Register (21 IR 260).

Second Notice of Comment Period and Notice of First Hearing: April 1, 1999, Indiana Register (22 IR 2350).

Rescheduled Notice of First Hearing: June 1, 1999, Indiana Register (22 IR 2894).

Rescheduled Notice of First Hearing: August 1, 1999, Indiana Register (22 IR 3499).

Rescheduled Notice of First Hearing: September 1, 1999, Indiana Register (22 IR 3944).

Date of First Hearing: October 13, 1999.

Third Notice of Comment Period: January 1, 2000, Indiana Register (23 IR 848).

Continuation of Comment Period: March 1, 2000, Indiana Register (23 IR 1419).

Notice of Second Hearing: May 1, 2000, Indiana Register (23 IR 2017).

Date of Second Hearing: July 12, 2000.

Notice of Third Hearing: June 1, 2001, Indiana Register (24 IR XXXX).

Date of Third Hearing: June 13, 2001.

327 IAC 2-1-7

327 IAC 2-1.5-9

327 IAC 2-11

Bold underline text has been inserted since preliminary adoption

Underline strikeout text has been deleted since preliminary adoption

SECTION 1. 327 IAC 2-11 IS ADDED TO READ AS FOLLOWS:

Rule 11. Ground Water Quality Standards

327 IAC 2-11-1 Goal

**Authority: IC 13-18-3-1; IC 13-18-4-1; IC 13-18-4-3; IC 13-18-4-4; IC 13-18-4-5;
IC 13-18-17-5**

Affected: IC 13-18-4; IC 13-18-17

Sec. 1. The goal of this rule is to maintain and protect the quality of Indiana's ground water and ensure that exposure to the ground water will not pose a threat to human health, any natural resource, or the environment. (*Water Pollution Control Board; 327 IAC 2-11-1*)

327 IAC 2-11-2 Applicability

Authority: IC 13-18-3-1; IC 13-18-4-1; IC 13-18-4-3; IC 13-18-4-4; IC 13-18-4-5;
IC 13-18-17-5

Affected: IC 4-22-2; IC 13-18-4; IC 13-18-17; IC 13-25-5-8.5

Sec. 2. (a) The following agencies shall adopt rules under IC 4-22-2 to apply the standards established in this rule to the facilities, practices, and activities they regulate:

- (1) The department of environmental management.
- (2) The department of natural resources.
- (3) The Indiana state department of health.
- (4) The state chemist of the state of Indiana.
- (5) The office of the state fire marshal.

~~(b) The standards established in this rule shall be used for the following purposes:~~

~~(1) To establish minimum compliance levels for ground water quality monitoring at regulated facilities.~~

~~(2) To ban the discharge of effluents into potable ground water.~~

~~(3) To establish health protection goals for untreated water in water supply wells.~~

~~(4) To establish concentration limits for contaminants in ambient ground water.~~

~~(c) (b)~~ An agency shall use its regulatory authority when adopting rules to ensure the criteria established in sections 5, 6, 7, and 8 of this rule will not be exceeded in ground water at or beyond the boundary of a ground water management zone established according to section 9 of this rule. When adopting rules, an agency may shall, to the extent consistent with its regulatory authority, apply ensure that facilities, practices, and activities are designed and managed to eliminate or minimize, to the extent feasible, potential adverse impacts to the existing ground water quality by applying preventative action levels, design standards, a monitoring framework, or other regulatory methods. to ensure that facilities, practices, and activities are designed and managed to eliminate or minimize potential adverse impacts to the existing ground water quality. An agency may consider technological and economic reasonableness and other appropriate factors in determining a feasible approach.

~~(d) (c)~~ The standards established in this rule shall not limit nor expand the authority of an agency.

~~(e) (d)~~ The standards established in this rule shall allow, as appropriate, ground water remediations the following to be consistent with the remediation objectives set forth in IC 13-25-5-8.5; :

(1) Ground water remediations conducted under:

(A) IC 13-22;

(B) IC 13-23; or

(C) IC 13-25-5.

(2) Ground water remediations that:

(A) are not emergency or non time-critical activities; and

(B) are conducted under:

(i) IC 13-24; or

(ii) IC 13-25-4.

(3) Ground water remediations conducted under any other provision of IC 13, as appropriate.

(f) For programs under the jurisdiction of the department of environmental management, the commissioner may, if requested in writing, provide the requesting party an assessment of the party's responsibilities at a particular site with respect to this rule. The assessment shall be based on the information available to the commissioner at the time of the request and may include an evaluation of the following factors:

(1) Department of environmental management regulatory requirements not contained in this rule.

(2) Existing ground water quality.

(3) The type, quantity, and source of any contamination found at a site.

(e) No person shall cause the ground water in a drinking water supply well to have a contaminant concentration that creates one (1) or more of the following:

(1) An exceedance of the numeric criteria established for drinking water class ground water in Tables 6(a)1 and 6(a) 2 of this rule.

(2) A level sufficient to be acutely or chronically toxic, carcinogenic, mutagenic, teratogenic, or otherwise injurious to human health based on best scientific information.

(3) An exceedance of one (1) or more of the following indicator levels:

(A) Chloride at two hundred fifty (250) milligrams per liter.

(B) Sulfate at two hundred fifty (250) milligrams per liter;

(C) Total dissolved solids at five hundred (500) milligrams per liter;

(D) Total coliform bacteria at nondetect.

(4) Renders the well unuseable for normal domestic use.

(f) No person shall cause the ground water in a non-drinking water supply well, including an industrial, commercial, or agricultural supply well, to have a contaminant concentration that, based on best scientific information, renders the well unuseable for its current use.

(g) The criteria established in subsections (e) and (f) are immediately enforceable on the effective date of this rule under IC 13-30 to protect ground water quality in water supply wells.

(h) Except as provided in subsection (g), the criteria established in this rule shall not be enforceable under IC 13-30 until subsequent rules are adopted to apply the standards established in this rule pursuant to subsections (a) and (b). (Water Pollution Control Board; 327

327 IAC 2-11-3 Definitions

Authority: IC 13-18-3-1; IC 13-18-4-1; IC 13-18-4-3; IC 13-18-4-4; IC 13-18-4-5;
IC 13-18-17-5

Affected: IC 13-11-2-71; IC 13-18-4; IC 13-18-17; IC 14-34

Sec. 3. The following definitions apply throughout this rule:

(1) “Agency” means one (1) or more of the following:

- (A) The department of environmental management.**
- (B) The department of natural resources.**
- (C) The Indiana state department of health.**
- (D) The state chemist of the state of Indiana.**
- (E) The office of the state fire marshal.**

(2) “Commissioner” means the commissioner of the department of environmental management.

(3) “Contaminant” means any solid, semisolid, liquid, or gaseous matter, or any odor, radioactive material, pollutant (as defined by the federal Water Pollution Control Act (33 U.S.C. 1362(6)), as amended on December 16, 1996)*, hazardous waste (as defined in the federal Solid Waste Disposal Act (42 U.S.C. 6903(5)), as amended on March 26, 1996), any constituent of a hazardous waste, or any combination of the items described in this subdivision, from whatever source, that:**

- (A) is injurious to human health, plant or animal life, or property;**
- (B) interferes unreasonably with the enjoyment of life or property; or**
- (C) otherwise violates:**
 - (i) environmental management laws; or**
 - (ii) rules adopted under environmental management laws.**

(4) “Criterion” means a numeric value or a narrative statement established to maintain and protect the quality of ground water.

(5) “Drinking water well” means a bored, drilled, or driven shaft or a dug hole that meets the following:

- (A) Supplies ground water for human consumption.**
- (B) Has a depth greater than its largest surface dimension.**
- (C) Is not permanently abandoned in accordance with 310 IAC 16-10-2.**

(6) “Environmental management laws” has the meaning set forth in IC 13-11-2-71.

(7) “Ground water” means water located below the ground surface in interconnected voids and pore spaces in the zone of saturation.

(8) “Ground water management zone” means a three (3) dimensional region of ground water around a potential or existing contaminant source where a contaminant is or was managed to prevent or mitigate deterioration of ground water quality such that the criteria established in this rule are met at and beyond the boundary of the region.

(9) “Naturally occurring concentration” means a constituent concentration in ground water that is not attributable to human activity.

(10) “Preventative action level” means a measured concentration of a chemical constituent that is:

(A) established on a site-specific or program-specific basis;

(B) used to evaluate sample analysis data from ground water monitoring systems;

(C) statistically measurable using standard laboratory analyses; and

(D) used to determine if further action is necessary to ensure the standards established in this rule are not violated.

~~(10)~~ (11) “Property boundary” means the edge of a contiguous parcel of land owned or leased by a common owner or lessee. Contiguous land shall include land separated by a public right-of-way, if that land would otherwise be contiguous.

~~(11)~~ (12) “Standards”, when used without qualification, means:

(A) the numeric and narrative criteria;

(B) the classification plan; and

(C) the method of determining where the criteria must apply;
established by this rule.

~~(12)~~ (13) “Surface water quality standards” means the water quality standards established in 327 IAC 2-1 and 327 IAC 2-1.5.

*33 U.S.C. 1362(6) is incorporated by reference. Copies of this publication may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402 or from the Indiana Department of Environmental Management, Office of Water Management, Indiana Government Center-North, 100 North Senate Avenue, Room 1255, Indianapolis, Indiana 46206.

**42 U.S.C. 6903(5) is incorporated by reference. Copies of this publication may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402 or from the Indiana Department of Environmental Management, Office of Water Management, Indiana Government Center-North, 100 North Senate Avenue, Room 1255, Indianapolis, Indiana 46206. (*Water Pollution Control Board; 327 IAC 2-11-3*)

327 IAC 2-11-4 Ground water classification plan

Authority: IC 13-18-3-1; IC 13-18-4-1; IC 13-18-4-3; IC 13-18-4-4; IC 13-18-4-5;
IC 13-18-17-5

Affected: IC 13-11-2-82; IC 13-18-4; IC 13-18-17; IC 14-34-4-6; IC 14-34-4-7; IC 14-37

Sec. 4. (a) All ground water shall be classified for purposes of determining, under rules adopted under IC 4-22-2 that apply the standards established in this rule, to determine the appropriate narrative and numeric criteria and level of protection to be applied to the ground water. All ground water is drinking water class ground water unless it is classified as:

(1) naturally limited ground water under subsection (b) or (c); or

(2) impaired drinking water class ground water under subsection (d).

(b) Ground water shall be classified as drinking water class ground water unless it is classified as:

(1) limited class ground water under subsection (c),(d),(e), or (f); or

(2) impaired drinking water class ground water under subsection (g) or (h).

~~(b)~~ (c) Ground water ~~is naturally~~ shall be limited ~~under this rule~~ if it is in accordance with one (1) of the following conditions:

- (1) Contains hydrocarbons that are producible considering their quantity and location, as has been demonstrated to an agency.
- (2) Located in the injection zone of or within the physical influence of a Class I, II, or III injection well operating under a valid underground injection control permit issued under the Safe Drinking Water Act (42 U.S.C. 300) and its implementing regulations.
- (3) Located in a zone within the physical influence of a gas storage well operating under a valid permit issued under IC 14-37.

~~(c)~~ (d) Ground water ~~is naturally~~ shall be limited ~~under this rule~~ if it ~~is in accordance with~~ has constituent concentrations that are the result of natural processes acting on post mine hydrology and is located within one (1) of the following: ~~conditions:~~

- (1) ~~Located within an area of probable cumulative impact on the hydrologic balance, as determined by the department of natural resources pursuant to IC 14-34-4-7(a)(3)(A), for a coal mine that has been fully released from the performance bond required by IC 14-34-6. A coal mine area that:~~

~~(A) has satisfied the requirements of IC 14-34 and is fully released from the performance bond required by IC 14-34-6; and~~

~~(B) is within a zone defined by the coal mine permit as it was formerly approved and regulated by the department of natural resources unless it is within a demonstrated zone of influence of a coal mine area as determined by the commissioner in consultation with the department of natural resources.~~

- (2) ~~Located in~~ The zone of influence, as determined by the commissioner in cooperation with the department of natural resources, of a coal mine area mined prior to August 4, 1977.

~~(e)~~ Ground water shall be limited if it is located within an agricultural crop root zone. A limited classification under this subsection shall extend no deeper than ten (10) feet below the land surface.

~~(d)~~ (f) The commissioner may classify ground water as ~~naturally~~ limited class ground water if a person requesting classification demonstrates, in a written submission, that the following conditions are met:

- (1) The ground water requested to be classified is as follows:

(A) Described in three (3) dimensions.

(B) Limited in one (1) of the following ways:

(i) The potential ground water yield is less than two hundred (200) gallons per day.

(ii) The naturally occurring total dissolved solids concentration is greater than or equal to ten thousand (10,000) milligrams per liter.

(C) Not currently used nor reasonably expected to be used for drinking water in the future, including the combined use of multiple low yield water bearing

zones.

(D) Not in a state-approved wellhead protection area established pursuant to 327 IAC 8-4.1.

(2) Notification, using certified mail, was given, at least forty-five (45) days prior to the submission of the request, to the following:

(A) An owner and, if one exists, a lessee of property within or adjacent to the land area above the ground water requested to be classified.

(B) Any person reasonably expected to be aggrieved or adversely affected by the classification.

(C) City and county health officers having jurisdiction within the land area above the ground water requested to be classified.

(g) Ground water is impaired drinking water when the following conditions are met:

(1) The ground water is not in a state-approved wellhead protection area established pursuant to 327 IAC 8-4.1.

(2) The ground water has one (1) or more contaminant concentrations above the numeric criteria established in section 6(a) or 6(d) of this rule.

(3) The commissioner has approved a ground water remediation, closure, cleanup, or corrective action plan that describes the nature and extent of contaminants exceeding the criteria established in section 6(a) or 6 (d), and one (1) of the following applies:

(A) A restrictive covenant has been placed on the property or properties overlying the ground water, and it prohibits the use of the untreated ground water.

(B) An alternate institutional control, such as a local ordinance, prohibits the use of the untreated ground water as a source of residential drinking water, and the commissioner has approved the alternate institutional control as an effective means of preventing exposure to the untreated ground water.

~~(e)~~ (h) The commissioner may classify ground water as impaired drinking water class ground water if it has one (1) or more contaminant concentrations above the numeric criteria established in section 6(a) or 6(d) of this rule and the person requesting classification demonstrates to the commissioner's satisfaction, in a written submission, that the following conditions are met:

(1) The ground water requested to be classified is as follows:

(A) Described, to the commissioner's satisfaction, in a hydrogeologic report that ~~shall~~ must, at a minimum, contain the following:

(i) A three (3) dimensional description of ground water flow and direction.

(ii) A description that includes the concentration of each contaminant that exceeds the criteria established in section 6(a) or 6(d) of this rule.

(iii) A map indicating the property or properties overlying the ground water requested to be classified.

(B) Not currently used nor reasonably expected to be used for drinking water in the future unless the following apply:

(i) The ground water is treated to ~~remove~~ reduce the contaminant

concentration to less than the numeric criterion established in section 6(a) or 6(d) of this rule.

(ii) A mechanism is in place to prevent untreated ground water from being used as drinking water for as long as a contaminant concentration is above the numeric criterion established in section 6(a) or 6(d) of this rule.

(C) Not in a state-approved wellhead protection area established pursuant to 327 IAC 8-4.1.

(2) Notification, using certified mail, was given, at least forty-five (45) days prior to the submission of the request, to the following:

(A) An owner and, if one exists, a lessee of property within or adjacent to the land area above the ground water requested to be classified.

(B) The following city and county positions having jurisdiction within the land area above the ground water requested to be classified:

(i) Government officials.

(ii) Planners.

(iii) Health officers.

(C) Any person reasonably expected to be aggrieved or adversely affected by the classification.

~~(f)~~ (i) The commissioner may deny a request to classify ground water as impaired drinking water class ground water if the exceedance of the numeric criterion established in section 6(a) or 6(d) of this rule was caused by an unlawful action of the person seeking the classification. Notwithstanding the impaired drinking water class ground water classification, a facility, practice, or activity or a ground water contamination assessment or remediation located within the land area above the ground water classified as impaired drinking water class ground water must comply with all otherwise applicable laws, rules, and standards.

~~(g)~~ (j) The commissioner may reevaluate and change a ground water classification determination upon the receipt of new or additional information pertaining to a classification requirement. (*Water Pollution Control Board; 327 IAC 2-11-4*)

327 IAC 2-11-5 Criteria for all ground water

Authority: IC 13-18-3-1; IC 13-18-4-1; IC 13-18-4-3; IC 13-18-4-4; IC 13-18-4-5;
IC 13-18-17-5

Affected: IC 13-18-4; IC 13-18-17

Sec. 5. Each class of ground water described in section 4 of this rule shall meet the following protective criteria:

(1) Ground water quality shall be maintained, at a minimum, to protect the existing current and reasonably expected future use of the ground water.

~~(2) Ground water shall be maintained and protected to ensure that a contaminant concentration attributable to human activity does not increase in a drinking water well.~~

~~(3)~~ (2) For waters of the state, surface water quality standards shall be met in the surface water at the ground water-surface water interface.

~~(4) In addition to the standards established in this rule, water designated by the commissioner to be surface water must comply with surface water quality standards.~~
(Water Pollution Control Board; 327 IAC 2-11-5)

327 IAC 2-11-6 Criteria for drinking water class ground water

Authority: IC 13-18-3-1; IC 13-18-4-1; IC 13-18-4-3; IC 13-18-4-4; IC 13-18-4-5;
IC 13-18-17-5

Affected: IC 13-18-4; IC 13-18-17

Sec. 6. (a) The following numeric criteria are health protective goals for untreated ground water used as drinking water; they establish and are the maximum permissible level of a contaminant in drinking water class ground water; and apply to drinking water class ground water at and beyond the boundary of the ground water management zone established according to section 9 of this rule:

(1) Numeric criteria for select inorganic contaminants:

<p align="center">Table 6(a)(1) Numeric Criteria for Inorganic Contaminants in Drinking Water Class Ground Water</p>		
<u>Chemical Abstract Registry Numbers</u>	Contaminant	Criterion (mg/l unless noted)¹
<u>7440-36-0</u>	Antimony	0.006
<u>7440-38-2</u>	Arsenic	0.05
<u>1332-21-4</u>	Asbestos	7 MFL ²
<u>7440-39-3</u>	Barium	2
<u>7440-41-7</u>	Beryllium	0.004
<u>7440-43-9</u>	Cadmium	0.005
<u>7440-47-3</u>	Chromium (total)	0.1
<u>**</u>	Combined beta/photon emitters	4 mrem/yr ³
<u>57-12-5</u>	Cyanide (free)	0.2
<u>16984-48-8</u>	Fluoride	4
<u>**</u>	Gross alpha particle activity (including radium 226 but excluding radon and uranium)	15 pCi/L ⁴
<u>7439-92-1</u>	Lead	0.015
<u>7439-97-6</u>	Mercury (inorganic)	0.002
<u>14797-65-0</u>	Nitrate (as N)	10
<u>14797-55-8</u>	Nitrite (as N)	1
<u>**</u>	Radium 226 and 228 (combined)	5 pCi/L

Table 6(a)(1) Numeric Criteria for Inorganic Contaminants in Drinking Water Class Ground Water		
<u>Chemical Abstract Registry Numbers</u>	Contaminant	Criterion (mg/l unless noted) ¹
7782-49-2	Selenium	0.05
7440-28-0	Thallium	0.002
Notes: *** No Chemical Abstract Service Number exists for this contaminant. ¹ mg/l is milligrams per liter. ² MFL is million fibers per liter greater than 10 micrometers in length. ³ mrem/yr is millirems per year. ⁴ pCi/L is picocuries per liter.		

(2) Numeric criteria for select organic contaminants:

Table 6(a)(2) Numeric Criteria for Organic Contaminants in Drinking Water Class Ground Water		
Chemical Abstract Registry Numbers	Contaminant	Criterion (mg/l unless noted)
15972-60-8	Alachlor	0.002
1912-24-9	Atrazine	0.003
71-43-2	Benzene	0.005
50-32-8	Benzo(a)pyrene	0.0002
1563-66-2	Carbofuran	0.04
56-23-5	Carbon tetrachloride	0.005
57-74-9	Chlordane	0.002
94-75-7	2,4-D	0.07
75-99-0	Dalapon	0.2
103-23-1	Di(2-ethylhexyl)adipate	0.4
96-12-8	Dibromochloropropane (DBCP)	0.0002
95-50-1	Dichlorobenzene, 1,2-	0.6
106-46-7	Dichlorobenzene, 1,4-	0.075
107-06-2	Dichloroethane, 1,2-	0.005
75-35-4	Dichloroethylene, 1,1-	0.007
156-59-2	Dichloroethylene, cis-1,2-	0.07

Table 6(a)(2) Numeric Criteria for Organic Contaminants in Drinking Water Class Ground Water		
Chemical Abstract Registry Numbers	Contaminant	Criterion (mg/l unless noted)
156-60-5	Dichloroethylene, trans-1,2-	0.1
75-09-2	Dichloromethane or methylene chloride	0.005
78-87-5	Dichloropropane, 1,2-	0.005
117-81-7	Di(2-ethylhexyl)phthalate	0.006
88-85-7	Dinoseb	0.007
85-00-7	Diquat	0.02
145-73-3	Endothall	0.1
72-20-8	Endrin	0.002
100-41-4	Ethylbenzene	0.7
106-93-4	Ethylene dibromide (EDB)	0.00005
1071-83-6	Glyphosate	0.7
76-44-8	Heptachlor	0.0004
1024-57-3	Heptachlor epoxide	0.0002
118-74-1	Hexachlorobenzene	0.001
77-47-4	Hexachlorocyclopentadiene	0.05
58-89-9	Lindane (gamma-BHC)	0.0002
72-43-5	Methoxychlor	0.04
108-90-7	Monochlorobenzene	0.1
23135-22-0	Oxamyl (vydate)	0.2
87-89-5	Pentachlorophenol	0.001
1918-02-1	Picloram	0.5
1336-36-3	Polychlorinated biphenyls (PCBs)	0.0005
122-34-9	Simazine	0.004
100-42-5	Styrene	0.1
1746-01-6	2,3,7,8-TCDD (Dioxin)	0.00000003
127-18-4	Tetrachloroethylene	0.005

<p style="text-align: center;">Table 6(a)(2) Numeric Criteria for Organic Contaminants in Drinking Water Class Ground Water</p>		
Chemical Abstract Registry Numbers	Contaminant	Criterion (mg/l unless noted)
108-88-3	Toluene	1
8001-35-2	Toxaphene	0.003
93-72-1	2,4,5-TP (Silvex)	0.05
120-82-1	Trichlorobenzene, 1,2,4-	0.07
71-55-6	Trichloroethane, 1,1,1-	0.2
79-00-5	Trichloroethane, 1,1,2-	0.005
79-01-6	Trichloroethylene	0.005
75-01-4	Vinyl chloride	0.002
1330-20-7	Xylenes (total)	10

(3) A drinking water class numeric criterion may be added to the criteria established in this subsection if adopted according to IC 4-22-2 and IC 13-14-9.

~~(b) A facility, practice, or activity shall not cause the following health protective goal levels to be exceeded in a drinking water well:~~

~~(1) Chloride at two hundred fifty (250) milligrams per liter.~~

~~(2) Sulfate at two hundred fifty (250) milligrams per liter.~~

~~(3) Total dissolved solids at five hundred (500) milligrams per liter.~~

~~(4) Total coliform bacteria at nondetect.~~

~~(c) (b)~~ An agency shall determine if further action is necessary to comply with the narrative criteria established in section 5 of this rule if the following indicator levels are exceeded in drinking water class ground water:

(1) Chloride at two hundred fifty (250) milligrams per liter.

(2) Sulfate at two hundred fifty (250) milligrams per liter.

(3) Total dissolved solids at five hundred (500) milligrams per liter.

(4) Total coliform bacteria at nondetect.

~~(d) (c)~~ If the commissioner determines that a site-specific numeric criterion for a contaminant without a drinking water class numeric criterion established in subsection (a) is necessary to protect human health, any natural resource, or the environment, a risk analysis shall be used to establish a numeric criterion for that contaminant and must:

(1) receive approval from the commissioner; and

(2) be based upon appropriate toxicological data.

~~(e) (d)~~ The naturally occurring concentration of a contaminant in drinking water class

ground water shall be the numeric criterion if that contaminant occurs at a concentration greater than the drinking water numeric criterion established in ~~this section~~, subsection (a) or (c) or an indicator level established in subsection (b).

~~(f)~~ (e) If drinking water class ground water at a facility, practice, or activity is determined to have one (1) or more contaminant concentrations above the numeric criteria established in this section that are not ~~the result of~~ attributable to the facility, practice, or activity under consideration, an agency shall manage the facility, practice, or activity or implement programs such that:

- (1) the facility, practice, or activity causes no further increase in the concentration of the contaminant determined to be above the numeric criterion established in this section; and
- (2) any design standard or management requirements that apply to the facility, practice, or activity are at least as stringent as the design standard and management requirements that would be applied to a facility, practice, or activity where ground water does not have one (1) or more contaminant concentrations above the numeric criteria established in this section.

~~(g)~~ (f) The commissioner may, for a ground water contamination assessment or remediation at a facility, practice, or activity under the jurisdiction of the department of environmental management, allow an appropriate site specific, risk based numeric criterion different from the numeric criterion established in subsection (a) or (d) to be applied to drinking water class ground water within the boundary of the ground water management zone established according to section 9 of this rule. (*Water Pollution Control Board; 327 IAC 2-11-6*)

327 IAC 2-11-7 Criteria for naturally limited class ground water

Authority: IC 13-18-3-1; IC 13-18-4-1; IC 13-18-4-3; IC 13-18-4-4; IC 13-18-4-5;

IC 13-18-17-5

Affected: IC 13-18-4; IC 13-18-17

Sec. 7. (a) Naturally Limited class ground water, classified according to section ~~4(b)~~ 4(c) of this rule, ~~shall comply with~~ must meet the narrative criteria established in section 5 of this rule.

(b) Naturally Limited class ground water, classified according to section ~~4(c)~~ 4(d) of this rule, ~~shall~~ must meet the following requirements:

~~(1) Numeric criteria established in this subsection shall be met at and beyond the boundary of the ground water management zone established according to section 9 of this rule.~~

~~(2)~~ (1) A contaminant attributable to activities associated with coal mining, not including the disposal of coal combustion waste at a surface coal mine under IC 14-34, shall must meet one (1) the greater of the following:

(A) The existing contaminant concentration, if it is greater than the numeric criterion established in section 6(a) of this rule.

(B) The numeric criterion established in section 6(a) of this rule, if it is not

~~greater than the numeric criterion established in section 6(a) of this rule.~~

~~(3)~~ (2) A contaminant not attributable to activities associated with coal mining, including ~~a contaminant attributable to an activity regulated under 310 IAC 12-3-93.1,~~ the disposal of coal combustion waste at a surface coal mine under IC 14-34, if the contaminant concentration exceeds the concentration attributable to a coal mining activity, ~~shall~~ must meet the numeric criterion established in section 6(a) ~~or 6(d)~~ of this rule.

(c) Limited class ground water, classified according to section 4(e) of this rule, must meet the following requirements:

(1) A contaminant attributable to pesticides, crop nutrients, or soil amendments that have been applied for agricultural purposes and used in a manner consistent with all applicable regulatory requirements shall meet the greater of the following:

(A) The existing contaminant concentration.

(B) The numeric criterion established in section 6(a) of this rule.

(2) A contaminant not attributable to pesticides, crop nutrients, or soil amendments that have been applied for agricultural purposes and used in a manner consistent with all applicable regulatory requirements must meet the numeric criterion established in section 6(a) or 6(d) of this rule.

~~(c)~~ (d) Naturally Limited class ground water, classified according to section ~~4(d)~~ 4(f) of this rule, ~~shall~~ must meet the following requirements:

~~(1) Numeric criteria established in this subsection shall be met at and beyond the boundary of the ground water management zone established according to section 9 of this rule.~~

~~(2)~~ (1) A contaminant with a drinking water class numeric criterion established in section 6(a) of this rule ~~shall~~ must have a ~~criterion determined by one (1) of the following: numeric criterion of ten (10) times the drinking water class numeric criterion established in section 6(a) of this rule.~~

~~(A) A risk analysis used to determine the criterion for a contaminant if the analysis:~~

~~(i) has received approval from the commissioner; and~~

~~(ii) is based on appropriate toxicological data.~~

~~(B) A default of ten (10) times the drinking water class numeric criterion established in section 6(a) of this rule.~~

~~(3)~~ (2) If the commissioner determines that a numeric criterion for a contaminant without a drinking water class numeric criterion established in subsection 6(a) of this rule is necessary, ~~the contaminant shall have a criterion determined according to subdivision (2)(A): to protect human health, any natural resource, or the environment,~~ a risk analysis shall be used to establish a numeric criterion for that contaminant and must:

(A) receive approval from the commissioner; and

(B) be based on appropriate toxicological data.

~~(4)~~ (e) The naturally occurring concentration of a contaminant in naturally limited class

ground water shall be the numeric criterion if that contaminant occurs at a concentration greater than the naturally limited numeric criterion established in this subsection; (b), (c), or (d).

~~(5)~~ (f) If naturally limited class ground water at a facility, practice, or activity is determined to have one (1) or more contaminant concentrations above the numeric criteria established in this subsection section that are not the result of attributable to the facility, practice, or activity under consideration, an agency shall manage the facility, practice, or activity or implement programs such that:

~~(A)~~ (1) the facility, practice, or activity causes no further increase in the concentration of the contaminant determined to be above the numeric criterion established in this subsection section; and

~~(B)~~ (2) any design standard or management requirements that apply to the facility, practice, or activity are at least as stringent as the design standard and management requirements that would be applied to a facility, practice, or activity where ground water does not have one (1) or more contaminant concentrations above the numeric criteria established in this subsection section.

~~(6)~~ (g) The commissioner may, for a ground water contamination assessment or remediation at a facility, practice, or activity under the jurisdiction of the department of environmental management, allow an appropriate site specific, risk based numeric criterion different from the numeric criterion established in this subsection section to be applied to naturally limited class ground water within at and beyond the boundary of the ground water management zone established according to section 9 of this rule.

(Water Pollution Control Board; 327 IAC 2-11-7)

327 IAC 2-11-8 Criteria for impaired drinking water class ground water

Authority: IC 13-18-3-1; IC 13-18-4-1; IC 13-18-4-3; IC 13-18-4-4; IC 13-18-4-5;
IC 13-18-17-5

Affected: IC 13-18-4; IC 13-18-17

Sec. 8. Impaired drinking water class ground water, classified according to section ~~4(e)~~ 4(g) or 4(h) of this rule, shall meet the following requirements:

~~(1) Numeric criteria established in this section shall be met at and beyond the boundary of the ground water management zone established according to section 9 of this rule.~~

~~(2)~~ (1) A contaminant not identified in the classification as being in excess of the numeric criterion of section 6(a) or ~~6(e)~~ 6(d) of this rule shall meet one (1) of the following: ~~(A)~~ the numeric criterion established in section 6(a) or ~~6(e)~~ 6(d) of this rule.

~~(B) The numeric criterion established by conducting a risk analysis that:~~

~~(i) uses site specific factors;~~

~~(ii) is based on appropriate toxicological data; and~~

~~(iii) has received approval by the commissioner.~~

~~(3)~~ (2) A contaminant identified in the classification as being in excess of the numeric criterion established in section 6(a) or ~~6(e)~~ 6(d) of this rule shall meet one (1) of the

following: (A) the existing contaminant concentration if it is greater than the numeric criterion established in section 6(a) or ~~6(e)~~ 6(d) of this rule and results from a source of contamination that:

- (i) (A) was from a previously unregulated facility, practice, or activity;**
- (ii) (B) was discovered after those who caused the contamination abandoned the site and those who caused the contamination cannot be found; or**
- (iii) (C) cannot be identified due to the nature of the specific constituent.**
- (B) The numeric criterion established by conducting a risk analysis that:**
 - (i) uses site specific factors;**
 - (ii) is based on appropriate toxicological data; and**
 - (iii) has received approval by the commissioner.**

(4) (3) Any design standard or management requirements that apply to a facility, practice, or activity with impaired drinking water class ground water must be at least as stringent as the design standard and management requirements that would be applied to a facility, practice, or activity with drinking water class ground water.

(4) The commissioner may allow an appropriate site specific, risk based numeric criterion different from the numeric criterion established in this section to be applied to impaired drinking water class ground water at and beyond the boundary of the ground water management zone established according to section 9 of this rule.

(Water Pollution Control Board; 327 IAC 2-11-8)

327 IAC 2-11-9 Ground water management zones

**Authority: IC 13-18-3-1; IC 13-18-4-1; IC 13-18-4-3; IC 13-18-4-4; IC 13-18-4-5;
IC 13-18-17-5**

Affected: IC 13-18-4; IC 13-18-17

Sec. 9. (a) The criteria established in sections 5, 6, 7, and 8 of this rule must be met at and beyond the boundary of the ground water management zone.

(b) The agency with jurisdiction over a facility, practice, or activity shall determine the location of the boundary and the duration of the ground water management zone. Once an agency has established a ground water management zone for a facility, practice, or activity under its jurisdiction, that ground water management zone shall apply in every instance to the facility, practice, or activity in the manner and for the duration specified by the agency.

(c) (b) An agency, having jurisdiction over a facility, practice, or activity that is subject to the criteria of this rule, may establish an appropriate program specific or site specific three (3) dimensional ground water management zone and shall determine its boundary location and duration considering the following factors:

- (1) Regulatory program requirements.**
- (2) Design standards.**
- (3) Monitoring frameworks.**
- (4) Hydrogeologic conditions.**
- (5) Risks of human exposure.**
- (6) Impacts to any natural resource and the environment.**

(7) Property controls.

(8) Physical and chemical properties of potential contaminants.

~~(d)~~ (c) An agency, having jurisdiction over a ground water contamination assessment or remediation that is subject to the criteria of this rule, may establish an appropriate program specific or site specific three (3) dimensional ground water management zone considering the following factors:

- (1) Regulatory program requirements.
- (2) Type and amount of a contaminant present.
- (3) Monitoring frameworks.
- (4) Hydrogeologic conditions.
- (5) Risks of human exposure.
- (6) Impacts to any natural resource and the environment.
- (7) Property controls.
- (8) Expected future use of the site.
- (9) Physical and chemical properties of existing contaminants.

~~(e)~~ (d) Rules adopted by an agency under IC 4-22-2 to apply the standards in this rule must include a default three (3) dimensional ground water management zone that shall apply if an agency having jurisdiction over a facility, practice, activity, or a ground water contamination assessment or remediation has does not established establish a program specific or site specific ground water management zone under subsection (b) or (c). The boundary of the default ground water management zone shall be located in accordance with one (1) of the following:

- (1) At each drinking water well that is:
 - (A) within three hundred (300) feet from the edge of a potential or existing contaminant source when the property boundary is greater than three hundred (300) feet from the edge of a potential or existing contaminant source; or
 - (B) within the property boundary when the property boundary is less than three hundred (300) feet from the edge of a potential or existing contaminant source.
- (2) The property boundary, when the property boundary is less than three hundred (300) feet from the edge of a potential or existing contaminant source, and there is no drinking water well within the property boundary.
- (3) Three hundred (300) feet from the edge of a potential or existing contaminant source when the property boundary is greater than three hundred (300) feet from the edge of a potential or existing contaminant source and there is no drinking water well within three hundred (300) feet from the edge of a potential or existing contaminant source.

~~(f)~~ (e) If overlapping ground water management zone boundaries are present at a facility, practice, or activity, an or ground water contamination assessment or remediation, then the agency or agencies with jurisdiction may combine them. (Water Pollution Control Board; 327 IAC 2-11-9)

SECTION 2. THE FOLLOWING ARE REPEALED: 327 IAC 2-1-7; 327 IAC 2-1.5-9.

